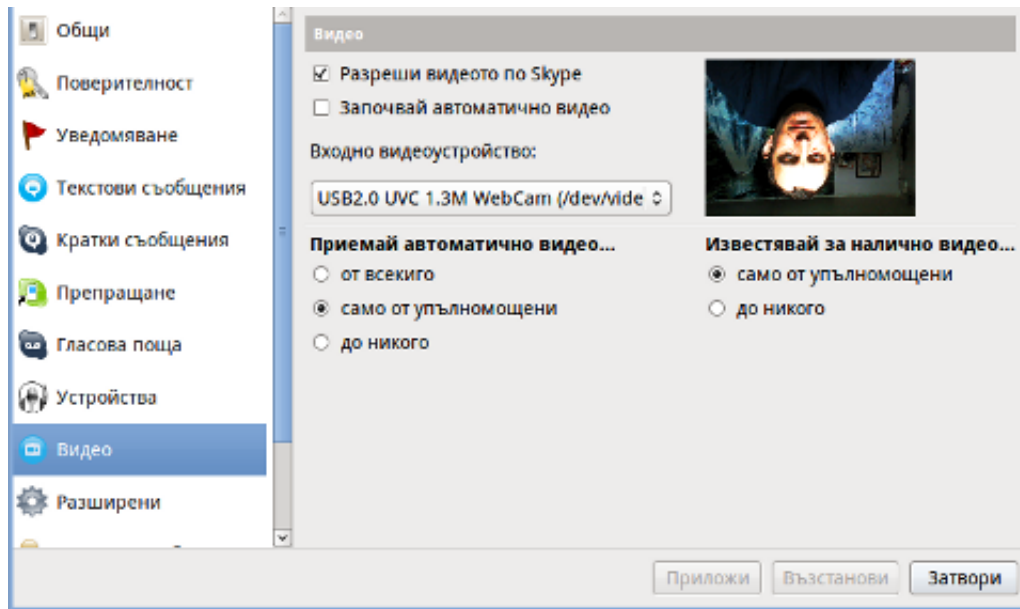# How to fix upside-down / inverted web camera laptop Asus K51AC issue on Ubuntu Linux and Debian GNU / Linux

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Does your camera show video correctly in **cheese** but shows captured video upside-down (inverted) in **skype** ?
This is an issue a friend of mine experienced on his **Asus K51AC-SX037D laptop** on both Ubuntu and Debian Linux.
As you can see in the picture above it is funny as with this bug the person looks like a batman ;)
As the webcam upside-down issue was present on both latest **Ubuntu 11.10** and latest stable **Debian Squeeze 6.02**, my guess was other GNU / Linux rpm based distro like *Fedora* might have applied a fix to this weird Skype inverted video (bat human like) issue.
Unfortunately testing the webcam with Skype on latest both **Fedora 16** and **Linux Mint 12** appeared to produce the same webcam bug.

A bit of research for the issue online and try outs of a number of suggested methods to resolve the issue led finally to a work around, thanks to this post
Here is few steps to follow to make the webcam show video like it should:

1. Install libv4l-0 package

root@linux:~# apt-get --yes install libv4-0
...

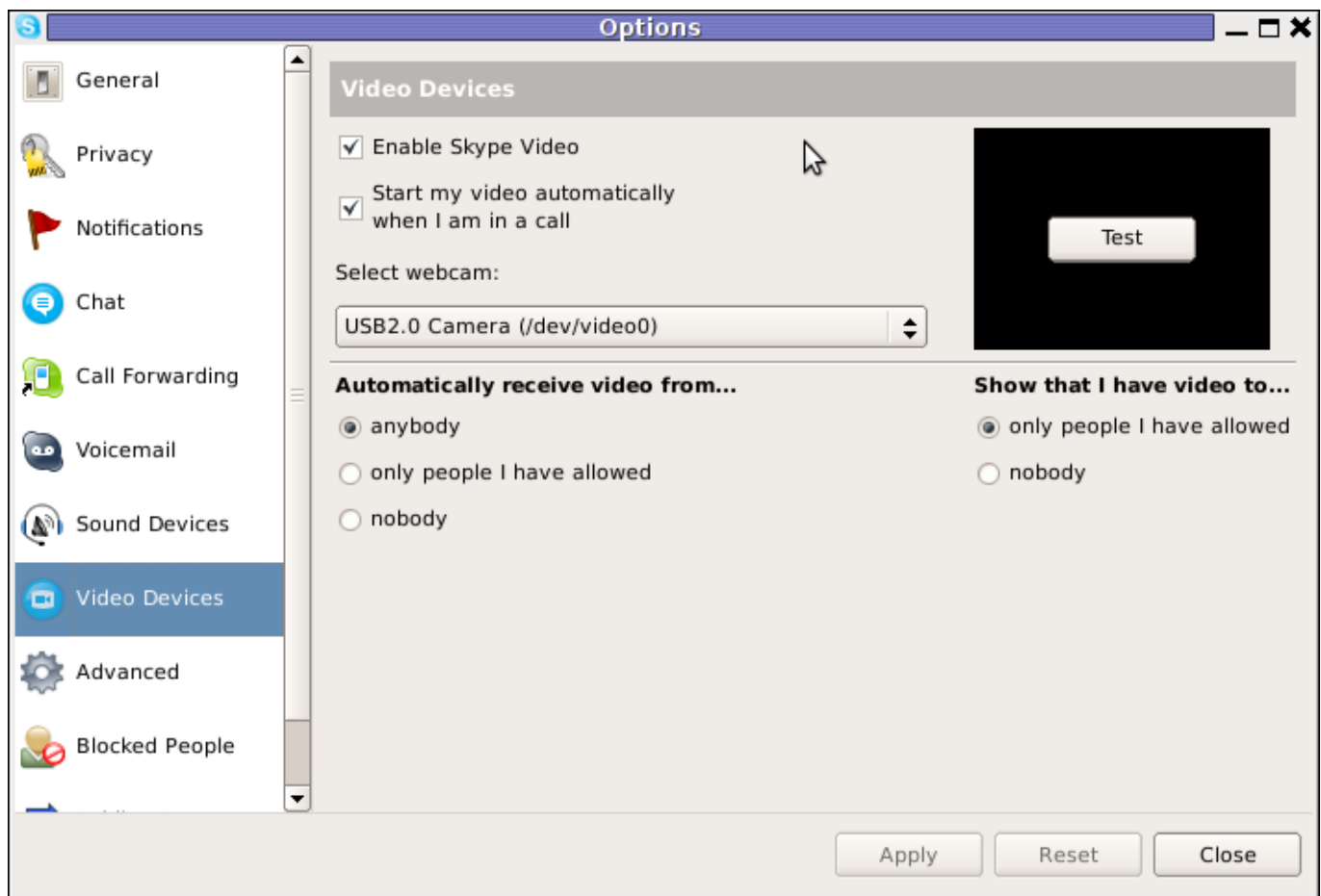Onwards to start skype directly from terminal and test the camera type:

hipo@linux:~$ LD_PRELOAD=/usr/lib/libv4l/v4l1compat.so skype

This is the work around for 32 bit Linux install, most people however will probably have installed 64 bit Linux, for 64bit Linux installs the above command should be little different:

hipo@linux:~$ LD_PRELOAD=/usr/lib32/libv4l/v4l1compat.so skype

Once skype is launched test the camera and see if the camera capture is now uninverted, through menus:

S -> Options -> Video Devices -> Test

2. Create a skype Wrapper script Launcher

To make skype launch everytime with exported shell variable:
LD_PRELOAD=/usr/lib32/libv4l/v4l1compat.so

A new skype wrapper bash shell script should be created in */usr/local/bin/skype* , the file should contain:
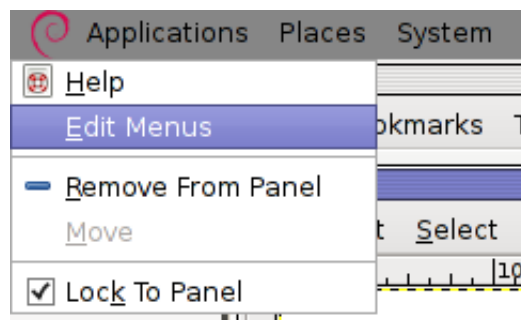
```
#!/bin/sh
LD_PRELOAD=/usr/lib32/libv4l/v4l1compat.so
/usr/bin/skype
```

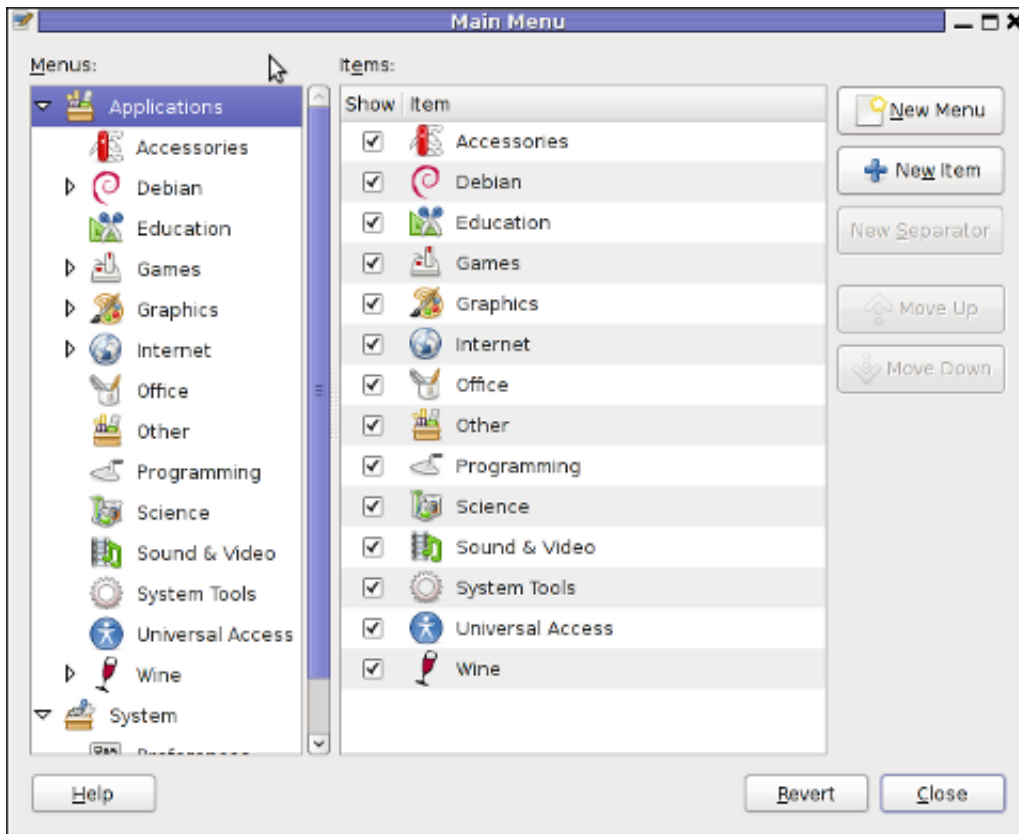To create the script with echo in a root terminal issue;

```
root@linux:~# echo '#!/bin/sh' >> /usr/local/bin/skype
root@linux:~# echo 'LD_PRELOAD=/usr/lib32/libv4l/v4l1compat.so' >> /usr/local/bin/skype
root@linux:~# echo '/usr/bin/skype' >> /usr/local/bin/skype
root@linux:~# chmod +x /usr/local/bin/skype
```

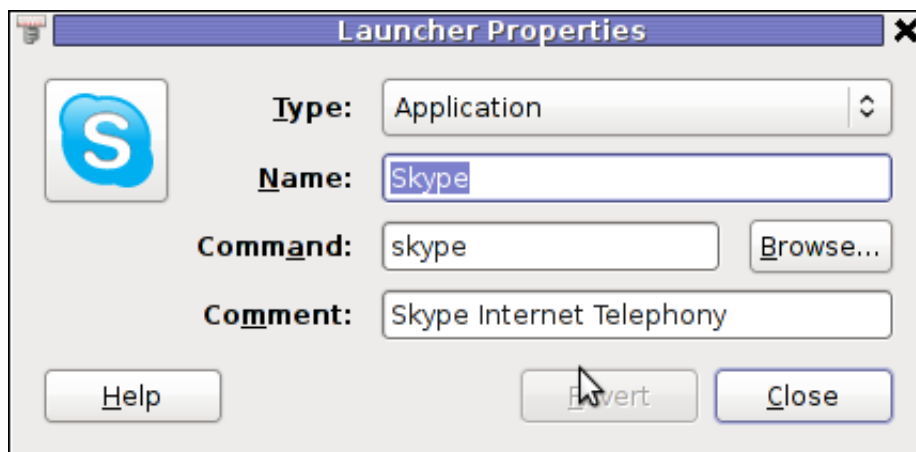### 3. Edit the Skype gnome menu to substitute */usr/bin/skype* Skype Launcher with */usr/local/bin/skype*

Gnome 2 has a handy menu launcher, allowing to edit and add new menus and submenus (menus and items) to the Application menu, to launch the editor one has to click over **Applications** with last mouse button (right button) and choose *Edit Menus*

The menu editor like the one in the below screenshot will appear:

In the preceeding Launcher properties window, **Command: skype** has to be substituted with:
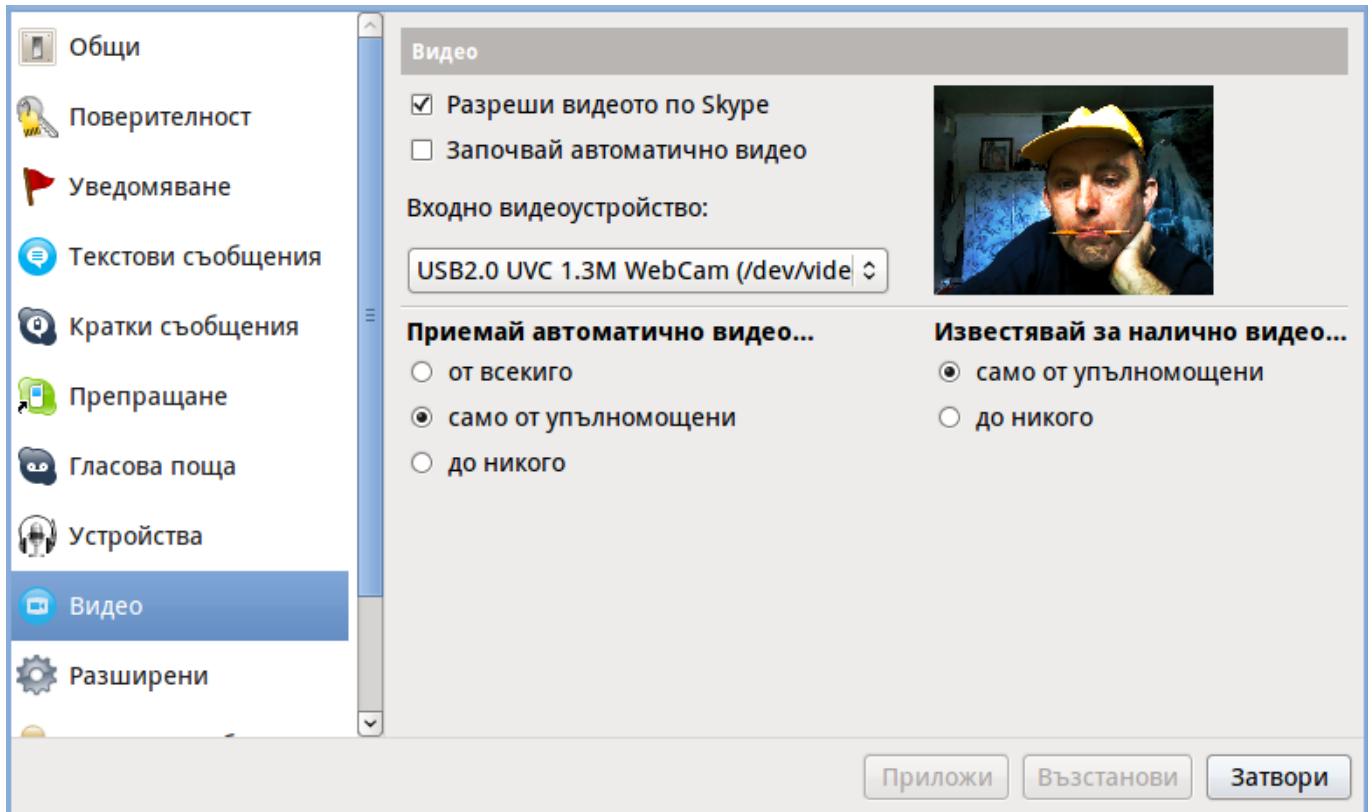

Command: /usr/local/bin/skype

For console freaks who doesn't want to bother in editting Skype Launcher via GUI
/usr/share/applications/skype.desktop file can be editted in terminal. Inside *skype.desktop* substitute:

Exec=skype

with

Exec=/usr/local/bin/skype

As one can imagine the *upside-down video image in Skype* is not a problem because of Linux, but rather another bug in Skype (non-free) software program.
By the way everyone, who is using his computer with Free Software operating system FreeBSD, Linux etc. knows pretty well by experience, that Skype is a very problematic software; It is often a cause for system unexpected increased system loads, problems with (microphone not capturing), camera issues, issues with pulseaudio, problem with audio playbacks ... Besides the long list of bugs there are unexpected display bugs in skype tray icon, bugs in skype messanger windows and at some rare occasions the program completely hangs and had to be killed with *kill* command and re-launched again.

Another worrying fact is Skype's versions available for GNU / Linux and BSD is completely out of date with its "competitor" operating systems *MS Windows, MacOS X* etc.
For people like me and my friend who want to use free operating system the latest available skype version is not even stable ... current version fod download from skype's website is **(Skype 2.2Beta)!**

On FreeBSD the skype situation is even worser, freebsd have only option to run Skype ver 1.3 or v. 2.0 at best, as far as I know skype 2.2 and 2.2beta is not there.

Just as matter of comparison the latest Skype version on Windows is **5.x**. Windows release is ages ahead its Linux and BSD ver. From a functional point of view the difference between Linux's 2.x and Windows

5.x is not that much different, what makes difference is is the amount of bugs which Linux and BSD skype versions contain...

Skype was about 6 months ago bought by Microsoft, therefore the prognosis for Skype Linux support in future is probably even darker. Microsoft will not probably bother to release new version of Skype for their competitor free as in freedom OSes.

I would like to thank my friend and brother in Christ Stelian for supplying me with the Skype screenshots, as well as for being kind to share how he fixed his camera with me.